



## Tajudin Aliyi Mohammed

2021 One Planet Laureate Candidate

### Position

Associate Researcher/ Plant Pathologist

### Institution

Ethiopian Institute of Agricultural Research (EIAR)

### Country

Ethiopia

### Education

MSc, Crop Protection, Hawassa University, Ethiopia

### Mentor

Dr. Netsanet Bacha Hei, Researcher and national plant quarantine research program coordinator, Ethiopian Institute of Agricultural Research (EIAR)

### Research Area

Plant pathology.

Tajudin Aliyi Mohammed lives in Ambo town, which is about 115 kilometers west of Addis Ababa. He is currently working at the Ethiopian Institute of Agricultural Research (EIAR), in the Ambo Agricultural Research Center in the Department of Plant Pathology. He received his first degree in horticulture from Ambo University in June 2013.

After that, he was a full-time employee at EIAR. While working at this institute, he had a chance to begin MSc studies at Hawassa University in 2016 in crop protection, specializing in plant pathology, graduating in 2018. Then he returned to EIAR, where he is now employed as an associate researcher.

"I am assigned to plant protection, which encompasses plant pathology, agricultural entomology, and weed science," he says. "There are four research teams in the plant pathology program: mycology, bacteriology, virology, and nematology. I have been working with the mycology research team. The work is discipline-based rather than crop-based." He plans to get a PhD in the same specialization and is now in progress.

Tajudin says he always planned a career in agricultural science. His goal is to improve the livelihoods of smallholder farmers through improved crop technology and increased crop yield per hectare.

"Agriculture is the backbone of Ethiopia, and yet agricultural research is not advanced," he says. "Crops are about 60 percent of the country's economy, but we suffer about 30 percent crop losses here, especially due to climate change and pests, which are causing significant yield loss."

Pest-management techniques like crop rotation are in place, but viable control strategies for plant diseases need to be advanced.

He says the most exciting research he is working on is agricultural mycology, which deals with fungal plant pathogens and focuses on plant disease diagnosis and management strategies, especially for wheat and maize crops but also for other crops with regard to fungal diseases.

Part of his work involves disease diagnosis and control strategies in different crops.

"As a mycology research team in Ambo ARC, we conduct different research experiments with smallholder farmers with regard to the management of various diseases," he says.

Tajudin says some technology has been developed and generated for stakeholders to manage diseases, but there is a long way to go.

Tajudin's research focuses on plant pathology and specifically on two fungal diseases that threaten wheat production in Ethiopia.

"Some laboratories and plant disease diagnostic reagents are not as advanced, particularly for the diagnosis of plant diseases and to develop plant disease-resistant crop genotypes."

He heard about the One Planet Fellowship from his institution when the head of human resources sent him some links. "I applied, and it's wonderful that I succeeded with it," he says. "I am very happy to have been chosen and to be part of the family of One Planet Fellowship and AWARD—they need young researchers to be vibrant and agricultural research leaders, which is what I want to be in my life."

He aspires to be an able agricultural research scientist with good interpersonal and technical skills so he can help to develop his country and Africa in general. "Stakeholders can access our research, and it should be disseminated to smallholder farmers, so we can improve their incomes and their livelihoods in general," he continues.

Tajudin says the One Planet Fellowship will definitely help him, especially because of the advanced science training available and other short-term training. "Also, the program will expose me to various researchers and advanced laboratories in other countries," he says. "And of course, since my organization is focused on agricultural research, our ultimate goal is also to improve the community's incomes by developing and providing advanced technologies in agriculture. Thus, if I am able to take advantage, my institute will also benefit."

As a recipient of the One Planet Fellowship, Tajudin expects to gain experience in conducting feasible research as he embraces all that he will learn.

In terms of challenges, he mentioned unexpected natural disasters like heavy rains and floods as abiotic factors as well as pest aggravation as abiotic factor in the applied research on the field, and lack of sufficient skills and knowledge in agricultural research and development in general in his institute.

Finally, he mentioned his PhD study in plant protection, specializing in plant pathology, which he recently began. However, he has fears in terms of expenses to continue his study because EIAR is not fully sponsoring his PhD. Moreover, he is concerned about his final thesis in terms of resources, the budget to undertake the research activities, and generally to accomplish.

**Tajudin Aliyi Mohammed** is one of the growing number of candidates selected to participate in the One Planet Fellowship. The One Planet Fellowship is a career development initiative that is building a robust pipeline of highly connected, inter-generational scientists equipped to use a gender lens to help Africa's smallholder farmers cope with climate change. The One Planet Fellowship is funded by the Bill & Melinda Gates Foundation, the BNP Paribas Foundation, the European Union and Canada's International Development Research Centre (IDRC). African Women in Agricultural Research and Development (AWARD) and Agropolis Fondation are jointly implementing the Fellowship.

Do you have any further questions? Send an email to: [oneplanet.award@cgiar.org](mailto:oneplanet.award@cgiar.org)

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